

What is claimed is:

- 1        1. A thermokeratoplastic probe that is connected to an  
2        electrical power supply, comprising:  
3        a handle;  
4        a tip that extends from said handle, said tip having a  
5        sharp point that can be inserted into a stroma of a cornea.
- 1        2. The probe as recited in claim 1, further comprising  
2        a stop that is attached to said tip and which limits the  
3        insertion of said tip into the cornea.
- 1        3. The probe as recited in claim 1, wherein said tip  
2        has an insertion length no greater than 400 microns.
- 1        4. The probe as recited in claim 1, wherein said tip is  
2        supported by a spring beam that extends from said handle.
- 1        5. A thermokeratoplastic probe system, comprising:  
2        a handle;  
3        a tip that extends from said handle, said tip having a  
4        sharp point that can be inserted into a stroma of a cornea;  
5        a power supply connected to said tip, said power supply  
6        provides a pulse of current at a power no greater than 0.2  
7        watts and for a time duration no greater than 1.0 seconds,  
8        such that the current flows into the cornea through said  
9        inserted tip to denature the cornea.

1        6. The system as recited in claim 5, further comprising  
2 a stop that is attached to said tip and which limits the  
3 insertion of said tip into the cornea.

1        7. The system as recited in claim 5, wherein said tip  
2 has an insertion length no greater than 400 microns.

1        8. The system as recited in claim 5, wherein said tip  
2 is supported by a spring beam that extends from said handle.

1        9. A method for denaturing a cornea, comprising the  
2 steps of:

- 3        a) inserting a tip into a stroma of a cornea;  
4        b) energizing said tip with electrical current to heat  
5 and denature the cornea; and,  
6        c) removing said tip from the cornea.

1        10. The method as recited in claim 9, further  
2 comprising the steps of repeating steps a)-c) a plurality of  
3 times in a pattern about the cornea.

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